California Environmental Protection Agency

⊘ Air Resources Board

GENERAL MOTORS LLC. Executive Order: A-006-2054

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles

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Pursuant to the authority vested in the Air Resources Board by Health and Safety Code (HSC), Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515 and 39516 and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: The following exhaust and evaporative emission control systems produced by the manufacturer are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

					TEST GR	OUP IN	FORMAT	ION					
MODE	- I TE	ST GI	ROUP	VEHIC	ES)	FUEL CATEGORY			ORY	FUEL TYPE			
2017	2017 HGMXD06.0398 HDV,					V, MDV5 DEDICATED SIN				GASOLINE			
l	JSEFUL	LIFE	(miles)	VE	HICLE EMIS	SION C	ATEGOR	Y	IN	FERIM / INTE	RMEDIA	TE IN-USE STD	
EXH	EXH/ORVR EVAP FTP						SFTP			FTP	FTP SFTP		
15	150000 150000 LEV3 ULEV400				ULEV400	UC (I	LEV3 ULEV (HOT1435 UC(LA92), SC03, FTP TEST CYCLE)			PM NMOG+NOX AND PM			
SPE	CIAL FE	ATUR		IAUST EMISS	ION CONTRO	DL		OBD ST	TATU	s	ENGINE	DISPLACEMENT (L)	
1		21	WC, TWC,	2HO2S(2),	SFI		FUL	L	ALL MODELS				
*	*							TAL		* 4.8, 6.0			
*			*		PARTIAI FINI		4 *						
			EV	APORATIVE 8	REFUELIN	G (EVA	P/ORVR)	FAMILY	INFO	ORMATION			
EVA	P / ORV	RFAN	IILY	EVAPORATIV	E STD CATE	GORY	Y EVAP EMISSION STD VEHICLE CLASS				SPECIA	L FEATURES	
Н	GMXF01	76860)		LEV 2		MDV5				-	HCT	
Н	GMXF02	23850)		LEV 2		MDV5				HCT		
Н	GMXR02	60843	3		LEV 2		MDV5				HCT		
					EMISSION (CREDIT	INFORM	ATION					
	A	LLOW	ANCE FO	R TEST GRO	JP		NMOG CREDIT FOR NMOG CR			NMOG CRE	OPTIONAL EX		
BASE	LINE P	ZEV	. AT	PZEV	TZEV	NO	N-PZEV 2	ZERO-E\	VAP	DO	R	TRUCKS	
* *					*		1	1		N		N	
	-			NMO	G AND FLEE	TAVE	RAGE IN	FORMAT	TION				
NMOG RAF	OG CH4 NMOG/NMHC HCHO/NMHC D			LDT (3751			T STD NMOG+NOX FLEE 0 GVW) MDV (8501-10000 G (g/mi)		0000 GVWF	MD\	NOX FLEET STD / (10001-14000 VWR) (g/mi)		
*	*	:	1.10	* .		*				*	*		

See the Attachment for Vehicle Models, Evaporative Family, Engine Displacement, Emission Control Systems, Phase-In Standards, OBD Compliance, Emission Standards and Certification Levels, and Abbreviations.

BE IT FURTHER RESOLVED:

The exhaust and evaporative emission standards and the certification emission levels for the listed vehicles are as listed on the Attachment. Compliance with the 50° Fahrenheit testing requirement may have been met based on the manufacturer's submitted compliance plan in lieu of testing. Any debit in the manufacturer's NMOG+NOx and

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greenhouse gas Fleet Average (PC or LDT or MDPV) or "Vehicle Equivalent Credit" (MDV) compliance plan shall be equalized as required.

BE IT FURTHER RESOLVED:

For the listed vehicle models, the manufacturer has attested to compliance with Title 13, California Code of Regulations, (13 CCR) Sections 1965 [emission control labels], 1968.2 [on-board diagnostic, full or partial compliance], 2035 et seq. [emission control warranty], 2235 [fuel tank fill pipes and openings] (gasoline and alcohol fueled vehicles only), and "High-Altitude Requirements" and "Inspection and Maintenance Emission Standards" (California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for PC, LDT and MDV).

BE IT FURTHER RESOLVED:

Listed vehicle models over 14000 lbs GVWR are certified to the requirements in 13 CCR Section 1961.2 pursuant to 13 CCR Section 1956.8(c)(3) (heavy-duty vehicles certified to emissions requirements applicable to medium-duty vehicles).

day of June 2016

Vehicles certified under this Executive Order shall conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 6

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

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CERT

STD

BIN

@ UL

LEV3 E10

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ATTACHMENT

HAUST AN	ID EVAPORATIVE	EMISSION STA	ANDARDS AND	CERTIFICATION	LEVELS
EXHAUS	T EMISSION STANDAR	RDS AND CERTIFI	CATION LEVELS (F	TP, HWFET, 50°F, 2	0°F)
UEL TYPE	monoxide; NOx: oxide adjustment factor; 2DH ORVR [g HC/gallon di 1000 miles; F: degrees	s of nitrogen; HCH0 HS/3DHS [g HC/tes spensed]: on-board s Fahrenheit; FTP:	O: formaldehyde; PM t]: 2/3 days diurnal+h refueling vapor reco federal test procedur	: particulate matter; F not-soak; RL [g HC/m very; g: gram; mg: m e; SFTP: supplement	RAF: reactivity i]: running loss; illigram; mi: mile; K:
		CH4: methane; NMOC monoxide; NOx: oxide adjustment factor; 2DF ORVR [g HC/gallon di 1000 miles; F: degrees	CH4: methane; NMOG: non-CH4 organic monoxide; NOx: oxides of nitrogen; HCH6 adjustment factor; 2DHS/3DHS [g HC/tes ORVR [g HC/gallon dispensed]: on-board 1000 miles; F: degrees Fahrenheit; FTP:	CH4: methane; NMOG: non-CH4 organic gas; HC: hydrocarbo monoxide; NOx: oxides of nitrogen; HCHO: formaldehyde; PM adjustment factor; 2DHS/3DHS [g HC/test]: 2/3 days diurnal+hORVR [g HC/gallon dispensed]: on-board refueling vapor reco 1000 miles; F: degrees Fahrenheit; FTP: federal test procedure. NMOG+NOx CO NOx	CH4: methane; NMOG: non-CH4 organic gas; HC: hydrocarbon; NMHC: non-CH4 monoxide; NOx: oxides of nitrogen; HCHO: formaldehyde; PM: particulate matter; Fadjustment factor; 2DHS/3DHS [g HC/test]: 2/3 days diurnal+hot-soak; RL [g HC/m ORVR [g HC/gallon dispensed]: on-board refueling vapor recovery; g: gram; mg: m 1000 miles; F: degrees Fahrenheit; FTP: federal test procedure; SFTP: supplement

FTP@50K	*	*	*	*	*	*	*			*	
FTP@UL	GASOLINE- LEV3 E10	0.158	0.400	1.7	7.3	*	*	*	6	0.005	0.010
50°F @4K	*	*	*	*	*	*	*	*	*		
			FUEL TVD	-	,	NMOG+NOx (g/mi) CO)
			FUEL TYP	E		CE	RT	STD	CER	Т	STD
HWFET @	50K		*.			*	,	*	3. 7. 3	To the state of	

STD

CERT

STD

CERT

STD

0.550

6.0

7

CERT

STD

CERT

STD

0.088 0.400 HWFET @ UL GASOLINE-LEV3 E10 20°F @ 50K

		(g/mi) (g/mi) (mg/mi) (g/mi) (g/mi) (g/mi) (mg/mi) CERT * * * * * * STD *								
1.4		- 3 - 27		US06		SC03	3	CON		
	FUEL TYPE						SC03			
@ 4K	*	CERT	* .	*		*	*			
		STD	*	* .	927	*	*			
		CERT	*	*	*	*	*	0.146	1.1	3
GASOLIN	GASOLINE-	STD	*	*	*		*	0.550	6.0	7

	WHOLE VEHICL	E EVAPO	PRATIVE E	MISSION	STANDAR	DS AND CE	RTIFICATIO	N LEVELS	
EVAPORATIVE FAMILY			WHOLE						
	FUEL TYPE	3DH	S (g/test) (@ UL	2DI	HS (g/test) @	RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
HGMXF0176860	GASOLINE- LEV3 E10	0.41	1.00	*	0.30	1.25	*	0.00	0.05
HGMXF0223850	GASOLINE - CA PHASE 2	0.53	1.00	*	0.48	1.25	*	0.00	0.05
HGMXR0260843	GASOLINE - TIER 2	0.38	1.00	*	0.28	1.25	*	0.00	0.05

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ORVR / FUI	EL ONLY / CA	NISTER	BLEED	EVAPORATIVE	EMISSION	STANDA	RDS AND	CERTIFICA	TION LEV	ELS			
				FUEL ONLY EVAP & CANISTER BLEED									
EVAPORATIVE FAMILY	ORVR (g/gallon) @ UL			FUEL TYPE	3DHS RIG TEST (g/test) @ UL			IG TEST) @ UL	BLEED CANISTER TEST (g/test) @ 4K				
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD			
HGMXR0260843	GASOLINE - TIER 2 UNLEADED	0.02	0.20	*	*	*	*	*	*	*			

: not applicable; #: pounds; UL: useful life; PC: passenger car; LDT: light-duty truck; LDT1: LDT<6000#GVWR,0-3750#LVW; LDT2: LDT<6000#GVWR,3751-5750#LVW; LDT3: LDT 6001-8500#GVWR,3751-5750#ALVW; LDT4: LDT 6001-8500#GVWR,5751-8500#ALVW; MDV: medium-duty vehicle; MDV4: MDV 8501-10000#GVWR; MDV5: MDV 10001-14000#GVWR; MDPV: mediumduty passenger vehicle; HDV: heavy-duty vehicle; ECS: emission control system; CERT: certification; STD: standard; FEL: family emission limit; GWR: gross vehicle weight rating; LVW: loaded vehicle weight; ALVW: adjusted LVW; LEV: low emission vehicle; ULEV: ultra LEV; SULEV: super ULEV; ZEV: zero-emission vehicle; PZEV: partial ZEV; AT PZEV: advanced technology PZEV; TZEV: transitional ZEV; TWC/OC: 3-way/oxidizing catalyst; ADSTWC: adsorbing TWC; HAC: HC adsorbing catalyst; WU: warm-up catalyst; NAC: NOx adsorption catalyst; SCR-U or SCRC/SCR-N or SCRC-NH3: selective catalytic reduction-urea/ammonia; NH3OC: ammonia oxidation catalyst; CTOX/PTOX: continuous/periodic trap oxidizer; DPF: diesel particulate filter (active); GPF: PM filter for spark-ignited engine; HO2S/O2S: heated/oxygen sensor; WR-HO2S or AFS: wide range/linear/heated air-fuel ratio sensor; NOXS: NOx sensor; PMS: PM sensor; RDQS: reductant quality sensor; NH3S: ammonia sensor; EGR: exhaust gas recirculation; EGRC: EGR cooler; AIR/AIRE: secondary air injection (belt driven)/(electric driven); PAIR: pulsed AIR; SFI/MFI: sequential/multiport fuel injection; DFI/IFI: direct/indirect fuel injection; TC/SC: turbo/super charger; CAC: charge air cooler; F/P/\$: full/partial/partial with fines on-board diagnostic; DOR: direct ozone reducing; HCT: hydrocarbon trap; BCAN: bleed carbon canister; prefix 2: parallel; (2) suffix: series; CNG/LNG: compressed/liquefied natural gas; LPG: liquefied petroleum gas; E85: "85%" ethanol ("15%"gasoline) fuel; E10: "10%" ethanol ("90%"gasoline) fuel; A: automatic (with lockup); M: manual transmission; SA: semi-automatic transmission; CV: continuously variable transmission; SCV: selectable continuously variable transmission; AM: automated manual transmission; AMS: automated manual-selectable transmission; OT: other transmission

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2017 MODEL YEAR: VEHICLE MODELS INFORMATION

	2017 191001	LL ILAN	. VLIII	JEE WOOD	ELS INFORI	ו אוז	1011	
MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD	PZEV TYPE
CHEVROLET	C35 CHEV CAB CHASSIS 2WD	MDV5	6.0	A 6	HGMXF0223850	1	F	*
CHEVROLET	C35 SILVERADO 2WD	MDV5	6.0	A 6	HGMXF0223850	1	F	*
CHEVROLET	G3500 EXPRESS 2WD CUTAWAY CH	MDV5	4.8	A 6	HGMXF0176860	1	F	*
CHEVROLET	G3500 EXPRESS 2WD CUTAWAY CH	MDV5	6.0	A 6	HGMXF0176860	1	F	*
CHEVROLET	G4500 EXPRESS 2WD CUTAWAY CH	HDV	6.0	A 6	HGMXF0176860	1	F	*
CHEVROLET	K35 CHEV CAB CHASSIS 4WD	MDV5	6.0	A 6	HGMXF0223850	1	F	*
CHEVROLET	K35 SILVERADO 4WD	MDV5	6.0	A 6	HGMXF0223850	1	F	*
CHEVROLET	K3500 SUBURBAN 4WD	MDV5	6.0	A 6	HGMXR0260843	1	F	*
GMC	C35 GMC CAB CHASSIS 2WD	MDV5	6.0	A6	HGMXF0223850	1	F	*
GMC	C35 SIERRA 2WD	MDV5	6.0	A6	HGMXF0223850	1	F	*
GMC	G3500 SAVANA 2WD CUTAWAY CH	MDV5	4.8	A6	HGMXF0176860	1	F	*
GMC	G3500 SAVANA 2WD CUTAWAY CH	MDV5	6.0	A6	HGMXF0176860	1	F	*
GMC	G4500 SAVANA 2WD CUTAWAY CH	HDV	6.0	A 6	HGMXF0176860	1	F	*
GMC	K35 GMC CAB CHASSIS 4WD	MDV5	6.0	A 6	HGMXF0223850	1	F	*
GMC	K35 SIERRA 4WD	MDV5	6.0	A6	HGMXF0223850	1	F	*